



Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990–2000



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For Further Information

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For more information regarding climate change and greenhouse gas emissions see EPA web site at <http://www.epa.gov/globalwarming/emissions/national>.

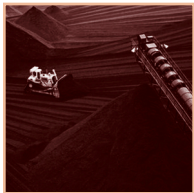
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Emissions by Economic Sectors

The photographs on the front and back cover of this report represent the six major economic sectors into which emissions have been allocated for analytical purposes. The six economic sectors are Electricity Generation, Transportation, Industry, Agriculture, Residential, and Commercial. The economic sectors represent an alternative method of allocating U.S. greenhouse gas emissions, different from the sectors defined by the IPCC and used in this report for international reporting and standardized methodological reasons (i. e. Energy, Industrial Processes, Solvent Use, Agriculture, Land-Use Change and Forestry, and Waste).



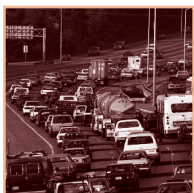
Residential: Residential sector greenhouse gas emissions are dominated by CO₂ from fossil fuel combustion, used to heat and supply electricity to homes. Emissions also result from landfills, wastewater treatment, waste combustion, human sewage, stationary combustion, and leaks from the use of refrigerants.



Coal for Electricity Generation: Coal is a fossil fuel that is combusted to indirectly generate electricity. In coal fueled combustors (i.e. boilers) the heat generated from burning coal is used to produce high-pressure steam. The high-pressure steam is then used to turn turbines and generate electricity. Carbon dioxide is the predominant greenhouse gas emitted from coal-fired boilers in Electricity Generation.



Agriculture: This is the only economic sector from which the majority of emissions are not from fossil fuel combustion. Nitrous oxide emissions from agricultural soils dominate this sector, followed by emissions from livestock due to enteric fermentation and manure management, and then CO₂ from fossil fuel combustion. Smaller quantities of methane and nitrous oxide emissions are derived from rice cultivation, agricultural residue burning, and mobile and stationary combustion.



Motor Vehicle Transportation: Petroleum-based products supplied almost all of the energy consumed for transportation, with nearly two-thirds related to gasoline consumption in automobiles and other highway vehicles. Motor vehicle emissions consist of CO₂, CH₄ and N₂O from the internal combustion engines and HFCs from motor vehicle air-conditioners and refrigerated transport.



Industrial: The industrial economic sector is the only economic sector to exhibit a decrease in emissions between 1990 and 2000. The majority of emissions are comprised of CO₂ from fossil fuel combustion, although more than 25 specific industrial processes contribute to greenhouse gas emissions from this sector.



Transportation: This economic sector has been steadily increasing from 1990 through 2000 due to several factors, including population growth, urban sprawl, low fuel prices, decreased average fuel efficiency, increased air travel and freight transportation. While transportation emissions are mostly from vehicles on the roads, they also come from airplanes, boats, trains, and other equipment.



Electricity Generation at Power Plants: Electricity generation in the United States is composed of traditional electric utilities, cogenerators, and nonutility power producers. This economic sector includes the generation, transmission, and distribution of electricity. Emissions result primarily in the form of CO₂ from fossil fuel combustion. Electricity generation accounts for over one-third of all U.S. greenhouse gas emissions, and is the largest of the economic sectors.



Commercial: Like most of the other economic sectors, commercial emissions are derived mainly from CO₂ emissions from the combustion of fossil fuels used to supply businesses with heat and electricity. Other types of emissions that result from this economic sector come from the use of landfills, combustion of waste, leaks from the use of refrigerants, and stationary combustion.



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